Metropolitan Transportation Commission

Transportation Sf Bay area

October 8, 1976

TO: Citizens of the Bay Area

FR: Joseph P. Bort, Chairman, Transportation Plan Development Committee

RE: Proposed Revision to Section IV of the Regional Transportation Plan

The attached documents, Draft Section IV, Transportation Development Program and Financial Plan, as well as the Popular Summary of Section IV, were approved for public review and comment by MTC's Transportation Plan Development Committee on October 8, 1976.

The Commission has invoked procedures for emergency amendment of the Regional Transportation Plan, rather than awaiting the regular annual revision of the Plan, because it believes that this revision will significantly aid its efforts to improve the transportation funding situation in the region and assure the allocation of funds to projects approved in its Transportation Improvement Program.

You may communicate your comments on the enclosed material by writing to MTC, Public Information Office, Hotel Claremont, Berkeley, California 94705; or you may present your comments at one of the following public hearings:

Date	Time	Location
Wednesday, October 27, 1976	10:00 a.m.	BARTD Board Room 800 Madison Street Oakland CA
Thursday, October 28, 1976	8:00 p.m.	Fireman's Fund Forum 3333 California Street San Francisco CA
Wednesday, November 3, 1976	8:00 p.m.	Lucie Stern Community Center, Rm. R 1305 Middlefield Road Palo Alto CA
Thursday, November 4, 1976	8:00 p.m.	Napa High School Lecture Hall 2475 Jefferson Street Napa CA

Comments on the Revision to Section IV must be received by November 4, 1976 to be considered as part of this revision process. Comments received after that date will be carried over for consideration as part of the 1977 revision process. It is anticipated that the Revision to Section IV will be reviewed and approved by the Transportation Plan Development Committee at their November meeting and forwarded to the MTC for approval in December.

Additional copies of this material may be obtained from MTC, (415) 849-3223, or may be examined in public libraries in the region.

HOTEL CLAREMONT • BERKELEY, CALIFORNIA 94705 • (415) 849-3223

REGIONAL TRANSPORTATION PLAN

SECTION IV

TRANSPORTATION DEVELOPMENT PROGRAM AND FINANCIAL PLAN

INTRODUCTION

The Transportation Development Program and the Financial Plan together constitute the IMPLEMENTATION PROGRAM for the Regional Transportation Plan. These two elements of the Plan are required by name in the legislation which established MTC.

MTC will annually adopt a TRANSPORTATION DEVELOPMENT PROGRAM (TDP). As required by MTC's authorizing legislation, the TDP will be based upon an estimate of the regional transportation needs during the ensuing 10 years and a schedule of priorities on a project basis to meet such needs. The TDP implements the objectives and policies presented in Section II and establishes priorities for the implementation of the regional transportation system proposals described in Section III.

The FINANCIAL PLAN is required to contain a proposal for each segment of the regional transportation system in the Regional Transportation Plan for the amount and source of revenues necessary to construct, maintain, and operate that segment. In developing the Financial Plan, the Commission is directed to consider the various sources of revenues without regard to constraints imposed by law on expenditures from these sources, if necessary, to provide adequate financing for the regional transportation system. The Commission shall, if necessary, recommend appropriate legislation to the State Legislature to secure adequate financing.

RESOURCE ALLOCATION AS A WHOLE

The Commission's policy with regard to adequate financing is that all available means be used to maintain at least the present proportion of resources from the public sector committed to transportation in this region (Policy 6.1).

Transportation of all types costs the people of the Region roughly $7 billion a year as of 1975. Over $3.8 billion was expended directly on personal transportation, and additional costs of at least $300 million more in pollution, congestion, and additional local public service needs may have been incurred by the transportation system. A further $3 billion is estimated to have been expended on the movement of goods.

The bulk of the money spent directly on personal transportation was spent for automobile transportation ($3.2 billion as compared to about $500 million for transit). About $300 million was used to build and maintain the highways, streets, and roads used by automobiles and transit vehicles. The remainder of the cost of the automobile system is accounted for by the costs of owning and operating the automobiles themselves. Expenditures on automobile transportation were over $2,000 for each Bay Area family compared to less than $300 per family for transit in 1975.

Under its legislative mandate, MTC influences in varying degrees the use of public funds, especially federal and state sources, used to operate and develop the regional transportation system. Public funds, however, represent less than 10 per cent of all transportation expenditures in the region. Much of the public funding is used for maintenance and operation of the existing system. The remainder is used to further develop the transportation system proposed in this Plan.

The total expenditure by public agencies for transportation accounted for 2.5% of total personal income in the U.S. in 1969. This percentage is 1.7% today; it may be less than 1% by 1980, if public sector revenues continue at their current rates. Moreover, the percentage of all transportation expenditures represented by public sector revenues has been declining and may be expected to decline further if no new sources of revenue are provided.

This section will propose that large additional revenue sources primarily for public transit are necessary to accomplish the Regional Transportation Plan, and these would add notably to taxation for Bay Area transportation. The larger public burden, however, may be viewed, not as an increase in the total cost of all transportation in the Region, but as indicating a reallocation of resources from the private to the public sector that might well bring a reduction in the total cost of transportation.

By 1986, we may estimate for the Region an annual outlay of some $4 billion (in 1976 dollars) for use of the automobile if usage continues to grow similar to previous years. This is a cost of $785 per capita. By 1986, the projected annual cost of public transit would be $122 per capita, in 1976 dollars. The comparison suggests that reduced automobile dependence -- a primary objective of the MTC Plan -- could result in substantial savings to the Region, a portion of which would be employed for the improvement of public transit service. The annual saving, for example, could surpass $800 million if automobile travel were held to present day levels while other growth trends continued.

The prospective shift of resources from the private to the public sphere is the basic idea that must underlie the financial program and ordering of priorities for implementing the Regional Transportation Plan. It is apparent, however, that investment in public transit development must be a prior commitment, in advance of any substantial savings in automobile usage brought about by a much-enlarged public transit system.

Throughout the next 10 years, a transit-emphasis plan will have to increase the level of current spending on mass transit, mainly through developing sources of funds not now available. It will be necessary to call upon a wide spectrum of revenue sources in order to provide the financing adequate for the Commission's Plan.

Airport operating expenses are not expected to be a claim upon funds other than those generated by the operation of the regional airport system. Assuming continuation of federal Airport Development Aid Program (ADAP) funds, revenues should be sufficient for financing capital improvements to airports used by commercial air carriers through 1986.[1] However, extensive liabilities for the reduction of noise, or the addition of costs for transit access, could result in a shortage of capital funds. General aviation airports of regional significance will depend to a much greater extent upon federal and state airport aid programs, and upon local tax sources, for their capital investment.

TRANSPORTATION DEVELOPMENT PROGRAM

The recommended 10-year Transportation Development Program consists of expenditures required for the construction, modification, and maintenance of the regional transportation system. The program, summarized in Tables 1-7, provides for development of the transportation system according to the plan as described in Section III. Although the program includes many more transportation requirements than could be met with current funding, it falls well short of providing the full regional transportation system considered necessary to accomplish the goals and objectives of the MTC Plan.

Ten Year Needs

Of the total long-range public investment required for highways, public transit, bridges, airports, system management and special needs, most represent improvements to the regional transportation system that, if needed at all, would be needed now or in the near future; and therefore would be con-

---

[1] An exception would be the development of a passenger facility of an airport with no operating history (e.g. Travis AFB). In this case general obligation bonds may be required to accomplish an airport development program.

sidered "10-year needs." Some improvements would be justified only by travel growth that is expected to occur beyond 10 years; some projects would be at least deferred for this length of time because of uncertainty as to whether they would ever be "needed," at least while interim arrangements were being tested. Despite these exceptions, an investment "need" of at least $10 billion could be set down as a 10-year estimate for the Region as a whole. A further expenditure of $7 billion over this period could be represented as the cost of maintaining, operating, and managing the transportation system at this level. But expenditures of this size would be well beyond the capacity of the Region to implement in effective transport programs within 10 years.

10-Year Planned Expenditures

The Transportation Development Program includes those 10-year needs which are programmed for expenditure within the next 10 years. These are indicated in Tables 1, 4, and 7.

The expenditures programmed, while still much exceeding the funding available to the Region from present revenue sources, is believed to indicate a reasonable commitment of public resources to transportation, and to represent a program for which the necessary funding could be provided under a comprehensive financial plan that included augmented funding from federal, state, local, and private sources.

As a portion of total 10-year needs, planned expenditures, aside from being recognized as needs, should have these characteristics:

1. They should be projects that can reasonably be programmed over the next 10 years. They should be projects that could be completed or begun within 10 years, and either could be financed from existing revenue sources or from new sources according to the financial plan

proposed by MTC.

2. They should be projects of higher priority as compared with 10-year needs identified but not programmed.

Unprogrammed 10-year needs are to a large extent composed of projects requiring further planning and evaluation of alternatives for the regional transportation system before they can establish a claim upon transportation funding.

The designation of 10-year needs as items to be included in the TDP depends upon the following base of information:

1. Continuing regional transportation planning and evaluation by MTC staff;
2. Individual planning studies of transport projects or programs which MTC directs, coordinates, or receives information from;
3. Development programs and cost estimates submitted to MTC by transportation agencies, which are reviewed, revised or extended by MTC staff;
4. Funding constraints which are based on economic forecasts of the next 10 years and which reflect inflation trends.

Alternative Development Levels

Because of the financial situation, however, a general order of priority is indicated within the Transportation Development Program. These alternative program levels are identified in the 10-year program:

1. Status Quo
2. Basic
3. Beyond Basic

Briefly, the highest level, Beyond Basic, includes the full amount of recommended planned expenditures as shown in Tables 1, 4, and 7. The Basic Level is limited to items in the total program that, in general, would claim top priority in the use of available funds. The Status Quo level assumes no

further development of the existing transportation system.

Expenditures programmed at these levels are shown in Tables 2 and 5.

Program Objectives

Basic Level Objectives. The Basic Level program is mainly made up of the ongoing programs of the Region's transportation agencies. It is considered to be of top priority that these programs are supported with sufficient funding.

The Basic Level provides for the operation and adequate maintenance of the existing transportation system, for replacement and rehabilitation programs for that system, and for the servicing of debts already incurred. In addition, it includes a growing Transportation System Management program of low- and non-capital measures to achieve a more efficient use of the system.

Besides these items, the Basic Level includes several major, and numerous lesser, capital development projects that represent important commitments in the regional transportation plan and, if not carried out, would probably lose federal funds for the Region. A modest increase in expenses is made to cover the costs of maintenance and operating of these additions.

Finally, the Basic Level provides for improvements to several transportation terminals and steps to improve scheduling, routing, pricing, and coordination among agencies.

The principal objectives of the Basic Alternative in the next 5 years are:

1. To complete and bring into full service, including night and weekend service, the BART system;
2. To achieve full operation of the light rail Muni-Metro system in San Francisco;
3. To complete development of ferry boat and feeder bus service in the Golden Gate Corridor, and increase the bus operation across the Golden

Gate Bridge;

4. To sustain at least existing levels of local transit services, while increasing service levels in selected locations, and modernize bus and trolley coach equipment;
5. To broaden the geographic coverage of transit service in San Mateo and Santa Clara Counties, the East Bay, and various North Bay communities, so that there is at least a minimum level of transit service in all urbanized areas of the Region;
6. To provide for the adequate maintenance and rehabilitation of the Region's existing highway and bridge system;
7. To complete three major freeway projects on the Federal Interstate Highway System and three other major projects now in progress, as well as the series of smaller road improvements included in the 5-year Federal Aid Urban program;
8. To construct the Dumbarton Transbay Bridge (The Antioch Bridge is included in the Status Quo System since the bonded debt service has already been obligated);
9. To carry out the authorized expansion of facilities and service at airline airports.

The second five years will provide for the continuation of projects begun during the initial 5-year period, on-going replacement and rehabilitation programs, and the start of capital projects whose need is anticipated for later years.

The Basic Level Program is supported by funding sources that exist now as part of the on-going transportation program within the Region, or are reasonably predictable and, in some instances, virtually compelled by emergency measures necessary to sustain transport services. Priorities among

Basic Level components are in a broad sense all the same: all are top priority.

Status Quo Objectives. In the event that funding was insufficient to carry on the present program for transportation development, it is presumed that the sole purpose of the 10-year program would be to provide for the operation and maintenance of systems that exist today so that they did not deteriorate. Presently, given restrictions that apply to the use of funds, not even the requirements of this level could be fully met from current revenues. This is particularly true of the transit portion of the system.

The consequence of not funding the Status Quo would be to require transport agencies to fall back on contingency plans. Service cutbacks would be required almost immediately in the 1977-78 year. The most dramatic curtailment of service would occur with BARTD. Since its major source of subsidy for operations (½% sales tax) is currently scheduled to expire in 1978-79, BARTD would be incapable of operating more than a token level of service based on remaining property taxes (5¢), TDA, and UMTA Section 5 grant allocations. Less catastrophic, though substantial, cuts would be necessary on an ever-increasing basis for San Francisco Muni and AC Transit. Each operator projects costs which will exceed all existing sources of support beginning in 1977-78. Approximately 5 years into the planning program, Golden Gate Transit District would be forced to begin curtailing services as well, its toll reserves exhausted after supplementing annual income on a continuing basis.

Only two major transit districts, Santa Clara and San Mateo, would survive the 10-year period without having to cut existing services. The recently approved ½% sales tax in Santa Clara would easily support its present bus system. San Mateo's fledgling transit district would also be easily carried by existing local resources. Municipal services in various North Bay communities

would likewise be unaffected.

The contingency plans would therefore impact transit services in the three BARTD counties far more severely than elsewhere in the Region, with BARTD itself being closed down as a result.

Beyond Basic Level Objectives. This is the recommended level of development and system support. It includes both the Status Quo and Basic Systems. It also provides for increased investment in non- and low-capital measures to achieve efficient use of the existing transportation system, additional capital development projects emphasizing corridor fixed-rail projects, improvements to general transportation terminals, a general airport aviation program above the current level.

Transportation Improvement Program (TIP)

The TIP is annually revised and adopted by the MTC. It consists of a 5-year program of projects for transport agencies in the region receiving federal transportation assistance. The first year is the Annual Element.

The projects included in the TIP are drawn from the 10-year Transportation Development Program. Because the contents of the TIP are constrained by the amount of funding reasonably predictable over the next 5 years, TIP items are contained in the Basic Level alternative of the 10-year program, except for those items not specifically programmed in the next 5 years, or uncommitted as to actual purpose.

If necessary, changes in the TIP due to reprogramming of individual projects will be incorporated in the full 10-year program as the Regional Transportation Plan is revised and updated each year. The full program is composed of many individual projects and programs, of large and small size, and tabulations in the accompanying tables are necessarily of a summary nature. Most TIP revisions are expected to be concerned with program details that

will not significantly affect the main elements of the 10-year program and will not, therefore, require revision of the Plan.

As explained in the Appendix to the RTP (pp. 130-132), the specific designation of any project in the TIP and the 10-year program does not imply Commission approval for the purpose of obligating transportation funds.

TABLE 1

STATE HIGHWAY SYSTEM AND TOLL BRIDGES
RECOMMENDED 10-YEAR PLANNED EXPENDITURES

	COST ($M)		
	Capital	Operating	Total
Administration and Support	---	449	449
Maintenance and Operations	17	788	805
Service of Existing Debt	87	---	87
Rehabilitation/Replacement	191	---	191
Operational Improvements (TSME/TCP)	154	---	154
System Development*	1,221	---	1,221
Other	121	---	121
TOTAL	1,791	1,237	3,028

* Projects listed in Table 3

TABLE 2-STATE HIGHWAY SYSTEM[1]
ALTERNATIVE DEVELOPMENT & OPERATIONS PROGRAMS

	1976/77	1977/78	1978/79	1979/81	5-Year Total	1981/86	10-Year Total
"STATUS QUO SYSTEM" ALTERNATIVE							
Administration & Suport	20	21	23	51	115	168	283
Maintenance & Operations	57	64	66	147	334	471	805
Service of Existing Debt	10	10	9	18	47	40	87
Rehabilitation/Replacement	19	24	14	22	79	100	179
Other (Safety Only)	7	5	4	9	25	25	50
TOTAL	113	124	116	247	600	804	1,404
"BASIC SYSTEM" ALTERNATIVE							
"Status Quo System"	113	124	116	247	600	804	1,404
Operational Improvements (TSME/TCP)	7	14	8	13	42	90	132
System Development[2]	28	46	48	131	253	185	437
Other (Not Including Safety)	1	9	7	13	30	35	63
Administration & Support Costs of Basic Plan Capital Improvements	6	7	7	17	37	56	93
TOTAL	155	200	186	421	962	1,170	2,129

TABLE 2 (continued)

	1976/77	1977/78	1978/79	1979/81	5-Year Total	1981/86	10-Year Total
"BEYOND BASIC SYSTEM" ALTERNATIVE							
"Basic System"	152	190	187	436	965	1,208	2,173
Operational Improvements (TSMC/TCP)	-0-	-0-	-0-	4	4	18	22
Rehabilitation/Replacement	-0-	-0-	-0-	2	2	10	12
System Development(3)	-0-	-0-	-0-	165	165	619	784
Other (Including Safety, et al.)	-0-	-0-	-0-	2	2	6	8
Administration & Support Costs of Basic Plan Capital Improvements	-0-	-0-	-0-	17	17	56	73
TOTAL	152	190	187	626	1,155	1,917	3,072

NOTES: (1) Includes toll bridges.

(2) See Table 3 "Basic System" for list of projects. The Planning Estimate of $345M in 1976/77 dollars is escalated at 8% per annum for this table.

(3) See Table 3, "Beyond Basic System" for list of candidate projects. The Planning Estimate of $491M in 1976/77 dollars is escalated at 8% per annum for this table.

TABLE 3 - STATE HIGHWAY SYSTEM[1] - SYSTEM DEVELOPMENT PROJECTS

"Basic System" Increment	Capital Costs ($M in 1976/77)
Ala 17/238: Expand freeway complex. Full project scope ($27M) would provide direct-connection ramps for all movements at the Rte 17/238 Interchange; widen Rte 17 from 6 to 8 lanes from Rte 92 to Rte 238 and meter ramps; widen Rte 238 from 4 to 6 lanes from Rte 17 to west of Rte 580. "Basic System" provides for the north-to-east direct-connection ramp only ($2M); "Beyond Basic System" provides funds ($25M) to complete full scope.	$ 2
Ala/Rte 84: Construct new Dumbarton Bridge and approaches. Full project scope would provide a 4-lane freeway between Rte 17 and the toll plaza, a 4-lane high-level bridge, a 4-lane expressway between the bridge and East Palo Alto, and upgrading and construction of 4 connecting roads on the west side ($100M). "Basic System" provides funds for the full project scope, except that a 4-lane expressway is substituted for the 4-lane freeway between Rte 17 and the toll plaza; project cost would be $93M -- assuming that $20M will be available from the Toll Bridge Fund, a bond issue of $73M would require $6.5M per year for debt service, for an expenditure of $79M during the 9-year portion of the total bond life covered herein (with additional expenditures of $136M required after 1985/86). Debt service based on 8%, 30 year straight line payback schedule.	79 (Total cost included debt service is $215, requiring $136M after 1985-86)
Ala 580: Construct 6-lane freeway from near Eden Canyon Road to near 167th Avenue. Two lanes reserved for buses and carpools. Reconstruct Rte 238/580 interchange.	90
Ala 980: Complete "Grove-Shafter" freeway from Rte 17 to Grand Avenue. Project scope provides for a 4-lane or 6-lane facility. Project is currently under design study for initial $14M staging.	32
CC 4: Construct 4-lane freeway between Rte 680 and Rte 242, including interchanges	8

TABLE 3 (continued)

"Basic System" Increment (continued)	Capital Costs ($M in 1976/77)
CC 17: Construct railroad grade separation near Standard Avenue in Richmond. See "Beyond Basic System" for further projects in the "Hoffman Corridor."	$ 6
CC 680: Modify interchanges between North Main Street and Willow Pass Road to improve access to BART and local circulation.	6
Nap 29: Complete Napa "Southern Bypass." Completion of this project will provide a 4-lane expressway from Imola Avenue (west) to Soscol Road, including at-grade signalized intersections at Stewart's Dairy and Soscol Avenue	13
Nap 29: Construct railroad grade separation between Napa Junction and Green Island Rd.	5
SCl 87: Guadalupe Freeway. Interim connection from Route 280 to Taylor Street. See "Beyond Basic System" for completion of freeway from Route 280 to Route 101	5
SCl 101/280/680: Complete freeway-to-freeway interchange with direct-connection ramps.	30
MTC/ABAG Corridor Policies:	
SM Coast Corridor: Construct 2-lane Devil's Slide Bypass and provide minor improvements on Rte 92 and Sharp Park Road. A 4-lane Devil's Slide Bypass without Sharp Park Road improvements ($24M) along with improvements to Rte 92 ($4M) is an alternative proposal.	11
Allowance for implementation of recommendations of current and future corridor and special studies: This contingency fund allows for advancing projects from the "Beyond Basic System" on developing, with CalTrans, new projects.	20

TABLE 3 (continued)

"Basic System" Increment (continued)	Capital Costs ($M in 1976/77)
Minor Projects: Generally, projects costing less than $5M each.	$ 50
TOTAL "BASIC SYSTEM" INCREMENT	. . . $357M
"Beyond Basic System" Increment	
Expand scope of "Basic System" Projects (see "Basic System" Increment):	
Ala 17/238 (freeway widenings, ramp metering, west-to-south ramp)	$ 25
Ala/Rte 84 (4-lane freeway connection on eastern approach to Dumbarton Bridge)	7
Ala 13/24: Complete interchange. Project would also improve access to BART.	13
CC 17: Upgrade "Hoffman Corridor." Full project scope ($70M) would provide a 4-lane freeway between Rte 80 and the Richmond-San Rafael Bridge. The project scope funded here ($37M) would provide a 6-lane expressway, with railroad grade separations, between the end of the existing 4-lane freeway near 47th Street and the toll plaza approach road; additional funding ($33M) for the 4-lane freeway alternative is provided below under "Expand Scope of 'Beyond Basic System' Projects."	37
CC 24/680: Revise Rte 24/680 Interchange. This project would also revise the Rte 680/Ygnacio Valley Road Interchange and improve acess to BART.	70
CC 80: Widen 6-lane freeway to 8 lanes between El Portal Drive and the Carquinez Bridge. New lanes may be reserved for exclusive bus/carpool use during weekdays.	32

TABLE 3 (continued)

"Beyond Basic System" Increment (continued)	Capital Costs ($M in 1976/77)
SF 80/280: Connect Rte 280 to Rte 80. Full project scope (cost undetermined) would provide full freeway connections and exclusive bus-lane connections to the Transbay Terminal. The project scope funded here ($44M) is sufficient to provide for full freeway connections without bus lanes. Direct bus connections from Rte 280 to the Terminal may be programmed at a later time given resolution of various planning issues at the local and regional levels.	$ 44
SF 480: Upgrade Doyle Drive. Full project scope ($19M) would provide 8-lane freeway. The project scope funded here ($10M) would provide safety improvements; additional funding ($9M)for the full project scope is provided below under "Expand Scope of 'Beyond Basic System' Projects."	10
SM 92/101: Complete Rte 92/101 Interchange and complete Rte 92 freeway across Seal Slough.	19
SM 380: Complete freeway connection to SF International Airport. Full project scope would complete the Rte 101/380 Interchange and provide a freeway entrance/exit for the airport. A down-scoped project could probably be funded for approximately $20M, but MTC has already approved the full project scope.	33
SC1 87: Complete "Guadalupe Freeway" between Route 280 and Route 101.	20
SL1 101: Construct "Morgan Hill Bypass." Full project scope ($68M) would provide a 6-lane freeway (graded for 8) and several interchanges. The project scope funded here ($42M) would provide a 4-lane freeway with fewer interchanges; additional funding for more interchanges ($13M) and for the wider facility ($13M) is provided below under "Expand Scope of 'Beyond Basic System' Projects."	42
Sol 37: Construct 4-lane freeway between Rte 80 and Rte 141.	18

TABLE 3 (continued)

"Beyond Basic System" Increment (continued)	Capital Costs ($M in 1976/77)
Sol/NAP 37: Upgrade the facility between the Napa River Bridge and Rte 121 at Sears Point. Full project scope ($21M) would provide a 4-lane expressway. The project funded here ($8M) would provide an improved 2-lane expressway; additional funding ($13M) for the full project scope is provided below under "Expand Scope of 'Beyond Basic System' Projects."	$ 8
Expand Scope of "Beyond Basic System" Projects (see discussions above):	
CC 17 (4-lane freeway)	33
SF 480 (freeway)	9
SCl 101 (interchanges)	13
SCl 101 (6-lane freeway)	13
Sol/Nap 37 (4-lane expressway)	13
MTC/ABAG Corridor Policies: Allowance for implementation of current and future corridor and special studies. This contingency fund allows for implementing the recommendations of MTC, MTC/ABAG, and MTC/CalTrans studies. An incremental cost of zero dollars is shown since it is anticipated that the studies will recommend downscoping many of the projects shown above. A transfer of resources from other areas is thought to be likely as a result, providing funds for projects in this category.	0
Minor Projects: Generally projects costing less than $5M each.	35
TOTAL "BEYOND BASIC SYSTEM" INCREMENT	. . .$494M

NOTE: (1) Includes toll bridges.

TABLE 4

TRANSIT SYSTEM -
RECOMMENDED 10-YEAR PLANNED EXPENDITURES

	COST ($M)		
	Capital	Operating	Total
Administration & Support; Maintenance & Operations (Existing System)	---	3,797	3,797
Service of Existing and Incurred Debt	602	---	602
Rehabilitation/Replacement	395	---	395
Operational Improvements (TSME/TCP)	56	41	97
System Development*	1,604	1,000	2,604
Other	113	121	234
TOTAL	2,770	4,959	7,729

* Projects listed in Table 6

TABLE 5 - TRANSIT SYSTEM
ALTERNATIVE DEVELOPMENT and OPERATIONS PROGRAMS

	1976/77	1977/78	1978/79	1979/81	5-Year Total	1981/86	10-Year Total
"STATUS QUO SYSTEM" ALTERNATIVE							
Administration and Support / Maintenance and Operations	254	272	300	681	1,507	2,290	3,797
Service of Existing Debt	50	53	54	113	270	284	554
Rehabilitation/Replacement	37	33	100	42	212	183	395
TOTAL	341	358	454	836	1,989	2,757	4,746
"BASIC SYSTEM" ALTERNATIVE							
"Status Quo System"	341	358	454	836	1,989	2,757	4,746
Operational Improvements (TSME/TCP)	5	6	6	11	28	28	56
System Development Capital Costs (1)	177	78	53	44	352	-0-	352
Other (1)	2	3	1	6	12	3	15
Maintenance & Operational Costs of Basic Plan Capital Improvements	10	42	58	146	256	533	789
TOTAL	535	487	572	1,043	2,637	3,321	5,958

TABLE 5 (contintued)

PROGRAM	1976/77	1977/78	1978/79	1979/81	5-Year Total	1981/86	10-Year Total
"BEYOND BASIC SYSTEM" ALTERNATIVE							
"Basic System"	535	487	572	1,043	2,637	3,321	5,958
Operational Improvements (TSME/TCP)	-0-	-0-	-0-	-0-	-0-	-0-	-0-
System Development Capital Costs(2)	-0-	-0-	-0-	237	237	1,015	1,252
Service of Incurred Debt	-0-	-0-	-0-	-0-	-0-	48	48
Other(2)	-0-	-0-	-0-	30	30	68	98
Maintenance & Operations Costs of Non-Basic Plan Capital Improvements	-0-	-0-	-0-	73	73	300	373
TOTAL	535	487	572	1,383	2,977	4,752	7,729

NOTES: (1) See Table 6, "Basic System," for list of projects. The Planning Estimate of $338M in 1976/77 dollars is escalated for this table.

(2) See Table 6, "Beyond Basic System," for list of candidate projects. The Planning Estimate of $704M in 1976/77 dollars is escalated for this table.

TABLE 6
TRANSIT SYSTEM - SYSTEM DEVELOPMENT PROJECTS

"BASIC SYSTEM" INCREMENT"	Capital Costs ($M in 1976/77 $
SF Muni: Previously Approved: Complete 4-part improvement program New Muni Metro subway/surface system w/support facilities 25 new midi-size buses 3 new cable cars Expanded support facilities for bus and trolley fleet	$105*
TIP Proposed: Relocation/new electric trolley wire systems Further expansion of bus and trolley support facilities Various projects to improve and/or extend J,N,M Metro lines (non-FAU) Embarcadero station track extension (non-FAU)	39
AC Transit: Previously Approved: None included	--
TIP Proposed: 110 new service buses with support (District 1 only) Misc. shelters, benches, and signing Administrative and Maintenance items New operational division Automatic vehicle monitoring system Purchase of RUCUS Electronic data processing hardware and software 10 new service buses w/support, Concord 3 new service buses w/support, Pleasant Hill 3 new service buses w/support, Moraga	24
BARTD: Previously Approved: Various mezzanine extension projects Outer Market Street subway/West Portal Station for Metro Daly City parking structure U.N. Plaza finish Additional vehicle storage and shop expansion Various shop equip./maintenance vehicles & materials buildup Engineering design/construction management Misc. support items	41

TABLE 6 (continued)

"Basic System" Increment (continued)	Capital Costs ($M in 1976/77 $)
BARTD: TIP Proposed: Various expansions/improvement to maintenance facilities New Communications systems and computer capabilities Various new maintenance vehicles Yard storage improvements (all three) Additional operational spur tracks Handicap facility modifications Additional escalators Consumable inventory buildup	$ 19**
GGBHTD: Previously Approved: Ferry terminal construction and related work in San Francisco and Sausalito	2
TIP Proposed: 15 articulated buses for ferry feeder service in Marin Co. Misc. equip. and facilities for bus and ferry systems support Transit street priority facilities in San Francisco for Golden Gate bus routes Bus shelters in San Francisco for Golden Gate patrons Over-the-water ferry demonstration project Vanpool demonstration project	7
SCCTD: Previously Approved: None included	--
TIP Proposed: Purchase 300 buses of various size, including 25 articulated coaches with support items New/expanded bus system support facilities at four coach terminals, Agnews transportation center, and various transfer centers New maintenance and transit operations equipment One-time start-up costs for system expansion	63***
SMCTD: Previously Approved: None included	--
TIP Proposed: Purchase 179 buses of various size with support items Misc. shelters, benches and signing New/improved maintenance facilities in north and central county Construct park-and-ride lots, bicycle storage Land acquisition Admin. and maintenance supplies and equipment	24
North Bay Municipal Systems: Previously Approved: None included	--

TABLE 6 (continued)

"Basic System" Increment (continued)	Capital Costs ($M in 1976/77 $)
TIP Proposed: Purchase 32 buses of various size for new/expanded service in Vallejo, Santa Rosa and Fairfield, with support items New/expanded maintenance facilities and support vehicles, all three Misc. shelters, benches and signing (although TIP does not include improvements planned for North Bay cities of Napa, Petaluma, Sebastopol and Healdsburg, $ expenditures are such that aggregate totals would be unaffected.)	3
East Bay Municipal Systems: Previously Approved: None included	--
TIP Proposed: Pittsburg/Antioch - Purchase 11 buses w/support, shelters & signing	1
Others - non-specific as to municipality or improvements programmed (see lifeline service element)	--
New Lifeline Transit Service: MTC Staff Proposed: Provide new local/feeder and express services in urbanized areas and corridors throughout the Bay Area not currently served by some minimum levels of public or private transit service (primarily portions of Ala and CC counties, Sol, Son, Napa, and Marin counties)	5
Special Projects: MTC Staff Proposed: Implement special services for the aged and physically handicapped; primarily through service contracts with private and public operators	5
TOTAL BASIC SYSTEM INCREMENT	. . . $338M

TABLE 6 (continued)

NOTES:

* Completion costs for 4-mile, 8-station Market St. subway portion of Muni Metro are included under BARTD system development, previously approved.

** A total of $68M (unescalated) currently programmed for major rolling stock and system control retrofit and/or replacement work has not been included under System Development, but is included in the Rehabilitation/Replacement line item of Tables 4 and 5 instead. MTC staff nevertheless recognizes the role which these initiatives will play in enabling BARTD to reach its full service potential.

*** A starter phase for light rail transit development in Santa Clara County totaling $87M (unescalated), although programmed in the TIP, has been deleted here due to inconsistency with Basic Plan concept. A "fixed guideway" element in the Beyond Basic Plan accommodates this and other guideway proposals.

TABLE 6 (continued)

"BEYOND BASIC SYSTEM" INCREMENT		Capital Costs ($M in 1976/77 $)
Expanded Local and Feeder Service: MTC Staff Proposed:		
New and expanded transit service in urbanized portions of the Bay Area with only "lifeline" levels of local service (primarily Marin County, portions of Alameda and Contra Costa Counties, and Solano, Sonoma and Napa County Municipalities)		$ 28
Expanded Corridor/Non-Guideway Experss Service: MTC Staff Proposed:		
New and expanded transit service on transbay bridges, express lines of GGBHTD, SF Muni, AC Transit, and SMCTD systems, and various corridor routes in North and East Bay Areas		13
Extended/Expanded Corridor Fixed Guideway Service: MTC Staff Proposed:		
Funding contingency for the implementation of MTC/ABAG corridor policies where this form of capital invetment may be justified. Includes engineering, design, right-of-way acquisition and construction work on one or more of the following types of guideway projects:		
	SP upgrade with downtown SF terminal	110
	BART extension to SFO/Millbrae	310
	Santa Clara Light Rail system in three intra-county corridors	150
	Fixed guideway connector to OIA from BART (~40%, ongoing)	35
	Sub-total, fixed guideway service	605
Other Development: MTC Staff Proposed:		
Terminals - New or rebuilt inter-modal terminal facilities in key locations of the region, with emphasis on new San Francisco, East Bay (Oakland), and San Jose terminals		55
Recreational Transit - New/expanded services to recreational areas in Sonoma coastal and mountain areas, interior mountain areas of Napa and Solano Counties		2
Other - Miscellaneous service demonstration contingency		1
TOTAL "BEYOND BASIC SYSTEM" INCREMENT		$ 704M
TOTAL 10-YEAR SYSTEM DEVELOPMENT		$1,042M

TABLE 7

AIRPORT SYSTEM
10-YEAR SYSTEM PLANNED EXPENDITURES

AIRLINE		Capital Costs ($M)
AT-1	SFO	$ 302*
AT-2	OAK	130*
AT-3	SJC	98**
AT-4	North Bay AFB	14***
	Subtotal	$ 544
GENERAL AVIATION		
AT-5	14 Existing Airports	$ 57****
AT-6	New Airports	(?)
	Subtotal	$ 57+ (?)
	GRAND TOTAL	$ 601+ (?)

* Estimates are being reviewed by Airport Sponsor and are subject to change.

** From 1971 RASSC study estimates with escalation factors. Detailed cost estimates will be available when the San Jose Airport Economic and Planning Management Program is completed.

*** From MTC/Solano County Travis AFB Feasibility Study.

**** Includes Gnoss Field, but not Hamilton AFB.

FINANCIAL PLAN

In recommending its Financial Plan, the MTC is guided by the following principles: (1) making best use of each source of funds for accomplishment of the transport programs, and (2) achieving equity among transport users and taxpayers for payment of transportation costs.

The Current Financial Situation. Currently--and according to projections for the next 10 years -- funding in the Region overall from existing revenue sources is substantially deficient to meet the needs of the Basic Level transportation program. Revenue shortfalls all occur for much the same reason: the inability of the fiscal arrangements for transportation, which are based to a large extent upon fixed rates and charges or grant-in-aid programs, to produce sufficient revenue in a period of high cost inflation.

At current funding levels, not even the Status Quo program can be sustained, so that some steps for augmented funding must be regarded as of an emergency nature. Meeting Basic Level needs will consume virtually all funding from existing and new revenue sources that can be anticipated for the next five years. The financial resource base for the full Transportation Development Program will, for the most part, require an entirely new set of funding arrangements as compared with those that exist today.

General MTC Policy on New Financing. In accord with its adopted policies, MTC has intended that increased revenue support for the transportation system be derived, to the maximum extent consistent with the objectives of the Regional Transportation Plan, upon funding from users of the system. To this end, the contribution to transportation from the private sector is to be encouraged by the Financial Plan, and revenues from tolls, fares, and other direct charges upon users may be allocated among purposes without constraints as to their use.

At the same time, it is recognized that increased charges upon users may not always further Plan objectives. The Commission is directed to give continuing consideration to reduced public transit fares. Also, circumstances have forced growing reliance upon non-user tax sources that more readily adjust to inflationary trends than rates and charges fixed by legislation.

Finally, although desiring maximum flexibility in the use of funds for financing the regional transportation system, it is a Commission policy that tax support for local transport systems be no more than in proportion to transport needs and desires identified in each locality.

Financial Priorities. Key policy decisions involving long-term funding commitments are necessary to establish the financing required by the Basic Level program. Basic Level needs represent essential and highest priority requirements for the Region's transportation system, but the funding they claim will then not be available for the support of the full Transportation Development Program. Recognizing this, it is important that these principal funding priorities be recognized in the financial plan:

- Short- and Long-Term Priorities: The use of funds to meet transportation needs of a short-term character, including the maintenance and operation of existing systems, versus the reserve of revenues for further development of the regional transportation system.
- Modal Priorities: The division of funds among modal segments of the regional transportation system, giving consideration to existing needs in one modal segment versus development needs in another.
- Regional Priorities: The division of funding among localities within the Region, considering the priority of transportation development in one part of the Region versus support for existing systems in another part.

Altogether, these priorities indicate that the Basic Level program needs -- although of highest priority and deserving of first consideration from available funding -- do not therefore lay automatic claim to all revenues or revenue sources ahead of other needs. The Financial Plan must balance short- and long-term purposes, and the needs of different modes and different parts of the region.

Anticipated Revenues for Transportation

Revenue sources now available for Bay Area transportation originate with the federal, state, and local levels of government, and with the private sector.

Estimates of money to be obtained from each source depend both upon future trends and upon public policies that control the revenue produced from each source and how the revenue may be used for transportation purposes. Projections of revenue in this section are reflective of current funding policies, except as future changes are definitely known or are deliberately assumed.

Assumed Future Conditions: For purposes of projecting revenues, certain underlying trends are assumed as follows:

- Population. Growth in the Region will continue as projected by ABAG and MTC staff at about 1.5% annually for the next 10 years.
- Travel. MTC's projections must rely primarily upon state and national estimates that affect the quantity of federal-state assistance forthcoming from taxes upon motor vehicle ownership and use. A continuing annual growth in travel of about 3.5% to 1980, and declining to 1.8% in 1985, is assumed; however, because of the national policy under the Federal Energy Policy and Conservation Act to decrease fuel consumption per mile, a 10-year trend is

assumed that does not notably increase the amount of fuel consumed.

- Economic Growth. For purposes of estimating revenues from the economic base such as retail sales or assessed values, it is assumed that the level of economic growth over 10 years will be greater than the population growth rate, despite temporary periods of recession.
- Cost of Price Inflation. Consistent with assumptions made in projecting the cost of the Transportation Development Program, an inflation rate in personal income and expenditures is estimated at around 6% to 1981, then declining.

Federal and State Transportation Aid. At the present time, authorized federal aid programs extend only to the 1980-81 period, and any anticipation of federal funding beyond that time must be a working assumption.

- Federal Highway Trust Fund. Thirty-six separate aid programs are presently supported by the Trust Fund, but the Interstate, Primary, Urban and Safety programs account for about 90% of the total. The assumption is made to extend program authorizations at present levels for 10 years. This estimate is much less than the revenues projected from taxes earmarked for the Fund, and much more than the aid that could be projected if the Interstate Highway program is ended in five years and the Trust Fund is abolished.
- Urban Mass Transit Assistance. The current program under the Act of 1974 includes funds to 1980 primarily for capital and operating assistance. An indefinite extension of the aid program seems virtually certain, and this projection has assumed one at an 8% annual rate of increase after 1980.

- Airport Development Aid Program (ADAP). Generated from user taxes, this trust fund is administered by the Federal Aviation Administration and allocates about $33 million a year to California for eligible airline and general aviation capital projects. There is no end to the program now in sight.
- State Highway Revenues. State-collected taxes upon motor fuel and vehicles provide funds for the maintenance, operation and administration of the State Highway Program, assistance to city-county road programs, and matching funds for federal Trust Fund aids. Estimates of funds depend mainly upon the projected amount of motor fuel consumption, but a moderate rate of increase in revenues is anticipated -- sustained, if necessary, by tax increases. A critical assumption is here involved: State revenue must be increased over the level projected for 10 years at the current rate of motor fuel taxation, or else it is unlikely that the Federal Trust Fund revenue previously estimated would be available, owing to the inability of the State to match federal money.
- State Airport Assistance. Federal airport assistance for general aviation is matched through the California Airport Assistance Program (CAAP), whose funds are derived from a fuel tax on general aviation aircraft users.

Federal-State Allocation to Bay Area. The funding from federal and state sources available to the region may only be estimated within a very broad range, due to the uncertainty of policy for the allocation of funds among the states and regions, as well as uncertainty about the future of the programs.

Some aids are predictable. The Federal Aid Urban (FAU) and Urban Transit Section 5 allocate money according to urban population. State aid to local

roads is distributed by a formula among the cities and counties. Federal Primary and Secondary highway aids are allocated among the states by formula. Within California, highway expenditures are partially controlled by formulas. These, however, are being reconsidered and probably will not long be continued. Interstate Highway allocations have been the largest single aid category from the Federal Government, and the Bay Area's share of the national distribution has been steadily declining in recent years. On the other hand, the Bay Area has received an exceptionally large proportion of transit capital grants, amounting to 81% of all those made to localities within California during the preceeding three fiscal years.

Any financial plan for investment in the regional transportation system must revolve -- in today's conditions -- around the availability of federal capital assistance, matched to a large extent with state aids.

A conservative estimate of highway program funds seems advisable, if based on the present allocation. For every dollar now generated by motor fuel and vehicle taxes in the Bay Area to finance construction on the State Highway System, little more than 50¢ is expended on behalf of the Region. More funds would be allocated if all money received in the Federal Trust Fund was apportioned, if aid programs were increasingly geared to urban area needs, if the Trust Fund was abolished and the federal taxes were reimposed by the State, or the State's allocation was revised. Even with no tax increase, a policy to spend in the region all monies earned here could add $500 million or more to the funds available for the road program. The MTC should hesitate to base its Financial Plan on an assumption that the large outflow of tax revenues will continue indefinitely.

A liberal estimate is made of Urban Mass Transit Assistance capital aid. On the basis of urbanized population, California would receive 15% of the national total. Within the State, the Bay Area would receive 25% of the State figure according to urbanized population. According to existing transit service needs and service levels, however, the region would receive 50% of the State -- or 7.5% of the national distribution. The latter percentages are those assumed for the Financial Plan.

It must be repeated that any assumptions about the availability of federal and state money must be contingent upon the supply of matching funds as necessary to meet requirements.

Discretionary Funding. Federal and state funding now provides these monies whose use is discretionary among different transport purposes.

- Federal-Aid Urban System funding, amounting to about $24 million a year for the Bay Area, is discretionary as between state road, local road and non-highway uses. It appears reasonable to project the FAU program indefinitely as a financing assumption.
- Interstate System funding is discretionary in that individual projects may be withdrawn in favor of non-highway projects. If the Program is continued beyond 1981, this funding could be an important factor.
- State Highway User Revenues are discretionary under Article 26 of the State Constitution. By 1978-79, up to 25% of revenues may be used for public transit fixed guideways if there is a favorable public vote in localities where such changes would occur (and, where the State Highway program is concerned, the withdrawal of highway projects costing an equal amount of money) is approved. No change is assumed in this provision.
- Federal Transit Aid (UMTA Section 5) is discretionary among transit capital and operating purposes; as a practical matter, virtually all of the funding from this source must be projected as operating assistance.

Regional and Local Sources. Funds for transportation collected and allocated by jurisdictions within the region are estimated in the financial plans submitted to MTC by transport agencies in connection with the Transportation Development Act and the Transportation Improvement Program. Estimates are for a 5-year period, annually updated. They are reviewed and revised as necessary by MTC, and extended to 10 years for the development of the Financial Plan.

- Bridge Toll Revenues. For the six transbay bridges that are the responsibility of the California Toll Bridge Authority, revenues from tolls at existing toll rates are projected to increase at a rate not much exceeding 1% annually. MTC may allocate net revenues, after bridge program requirements are met, for transit capital improvements and other purposes in the area served by the bridges. At present, unless construction programs for the Dumbarton and Antioch Bridges are delayed, no net revenues are anticipated during the next 10 years at current toll rates.
- (To be inserted: toll revenue projection for Golden Gate Bridge.)
- Transportation Development Act (TDA) Program. The amount of revenue available for public transit assistance depends upon the projected volume of retail sales, less amounts used for planning and administration, or for purposes other than transit support. Since the rate of increase is influenced by both inflationary pressures and real economic growth, a high initial rate of 9% increase in total revenue seems justified, falling to 7% after 1981.
- Operations Revenues. Revenues from transit fares reflect assumed patronage growth rates, which have been extrapolated 1981-86 by a 5.5% growth factor. Where patronage estimates are not available, projections have been made as a percentage of operating expenses.

Operating revenues include airport landing fees and other charges.

- Sales Tax Funding. Remaining revenue availability from the emergency BART 1/2% sales tax is included for the 1976-77 and 1977-78 years, but not projected further as an existing source. Revenue from Santa Clara County's 1/2% sales tax is projected for 10 years at 9.7% annually in the first years, 7.5% in 1980-81, and 6.5% thereafter.
- Property Tax Revenue. Generally, transit agency financial plans have estimated a higher rate of increase in revenues for transit subsidy than the overall growth in assessed values, reflecting rising tax rates for transit purposes. MTC projections have carried this assumption through 1979-80 at about a 12% annual growth rate, but then have scaled the rate back to 5.5% thereafter.

  About $1.5 million annually are expended from city and county general funds for general aviation airport capital and operating expenses statewide.
- Other Local Revenues. Funds from reserves, interest earned in connection with debt financing, allocations from federal revenue-sharing funds, and miscellaneous other sources have been included in MTC's estimates and extrapolated to 1986.

Revenue Needs: TDP Compared with Existing Revenue Sources

The financial situation as currently projected is summarized in Table 8 for the three alternative levels of the Transportation Development Program. Table 8 describes the public transit and State highway programs for the region.

The overall comparison for the region highlights these critical revenue needs:

- Transit Capital Investment. The estimate of funds available is increased for successively higher program levels and for the 10-year period over the 5-year

period, mainly because federal funding is assumed to be available if more capital investment projects are included in the program. Given the prognosis about federal aids, this is a highly problematic assumption. In partial recognition of it, the federal share for Beyond Basic Level costs was reduced to 60% from the 80% at Basic Level. Since the Beyond Basic capital improvement program is largely in the latter 5 years of the 10-year program, the indicated revenue shortfall is mainly in this period and represents the matching money for federal aids that would have to be developed in the region.

. Transit Operating Needs. The largest revenue deficits in the 10-year program occur from the operation of public transit. At the Basic Level (which adds about 20% to the operating expense of existing transit systems) it is estimated that about one-quarter of operating expenses in the region could not be met from revenues anticipated from operating subsidy programs, local tax funds, and fares. The Beyond Basic Level adds little to this shortfall, but only for the 10-year period. Once transit systems programmed for development in the 10-year period began operation, substantial new operating deficits would be added to those shown in Title 8.

. State Highway Program. Of the roughly $1.75 billion estimated expenditures on State highways and toll bridges in the region, assuming the continuation of federal and state programs at their present levels, adequate maintenances, support, administration, and debt service for the system would absorb at least $1.2 billion. An additional $400 million would be taken by rehabilitation and replacement programs, and programs for improved operational efficiency and safety at the Basic Level. Less than $200 million would remain for major improvements to the system; but this figure is an overstatement, for failure to use federal funding on major capital projects would result in its loss to the State and region altogether.

At current revenue levels, it appears impossible to cover even the Status Quo essentials. If the system and highway organization are adequately maintained, large amounts of federal monies might be sacrificed for lack of matching funds. To achieve a Basic Level Program, over $100 million in the next 5 years, and over $400 million in the next ten, would have to be added to revenues. It should be noted, however, that these revenue deficits are all dependent upon the apportionments assumed for the State out of federal programs, and the expenditures assumed to be made by the State within the region. Reductions in the estimate of funding deficiencies would be possible by making any of a number of revisions in these key assumptions:

- Full apportionment of all Federal Highway Trust Fund revenues, rather than those now authorized.
- A higher proportion of federal highway aids allocated to California, particularly if more focus was given in federal policy to funding urban transportation needs.
- A higher proportionate allocation of federal-state funds to the Bay Area, which might be brought about by increasing the urban focus in either federal or state policy.

TABLE 8

COMPARISON OF REVENUES WITH COSTS
FOR TRANSPORTATION DEVELOPMENT PROGRAM

	($Millions) Escalated			
	5-Year Totals		10-Year Totals	
	Capital Imprvmts.	Oper. & Mainten.	Capital Imprvmts.	Oper. & Mainten.
STATUS QUO SYSTEM ALTERNATIVE:				
Transit				
Potential Funds Available	617	1,272	1,111	2,824
System Costs	(482)	(1,507)	(949)	(3,797)
Surplus (Deficit)	135	(235)	162	(973)
Highway				
Potential Funds Available	411	449	674	1,088
System Costs	(151)	(449)	(316)	(1,088)
Surplus (Deficit)	260	0	358	0
Transportation System Surplus (Deficit)	395	(235)	520	(973)
BASIC SYSTEM ALTERNATIVE:				
Transit				
Potential Funds Available	921	1,338	1,289	3.239
System Costs	(874)	(1,763)	(1,372)	(4,586)
Surplus (Deficit)	47	(425)	(83)	(1,347)
Highway				
Potential Funds Available	373	487	581	1,181
System Costs	(480)	(487)	948	(1,181)
Surplus (Deficit)	(107)	0	(367)	0
Transportation System Surplus (Deficit)	(60)	(425)	(450)	(1,347)
BEYOND BASIC SYSTEM ALTERNATIVE:				
Transit				
Potential Funds Available	1,020	1,358	2,217	3,442
System Costs	(1,039)	(1,809)	(2,770)	(4,959)
Surplus (Deficit)	(19)	(451)	(553)	(1,517)
Highway				
Potential Funds Available	356	504	581	1,181
System Costs	(660)	(504)	(1,774)	(1,254)
Surplus (Deficit)	(304)	0	(1,193)	(73)
Transportation System Surplus (Deficit)	(323)	(451)	(1,746)	(1,590)
		(774)		(3,336)

Financial Plan for Basic Level Program

The plan for developing a sufficient level of funding for the Basic Level must largely be concerned with existing revenue sources -- their amount, and their allocation. Nearly all funds from present sources are claimed -- or might be claimed -- by Basic Level needs. Where shortfalls exist, choices must be made about the use and possible reallocation of existing revenues versus new funding. The policy focus is short-term, in that arrangements for meeting unfunded needs are required now or within a few years. But revenue commitment of a long-term character must be made.

Also, the policy focus, while regionwide and comprehensive as regards revenues and transport programs, must allow for the variety of diverse situations and financing methods within the region as they have developed to date. The financial plan must indicate policies that are most suitable to particular transport agencies and programs. A uniform approach to any problem, such as the appropriate level of public transit fares, for the region as a whole should be followed only along broad outlines.

Financing Transit Operating Deficits. Within the region, the funding shortfalls from transit operations are nearly all associated with the BARTD, AC Transit, and San Francisco Muni services in the three "BARTD" counties, and with Golden Gate District bus-and-ferry transit service. The commuter service deficit of the Southern Pacific system would be added to the others if the railroad company did not fund the service from freight revenues as well as fares.

The shortfalls estimated for Basic Level operations by existing agencies are here summarized:

	5-Year ($ Millions)	10-Year
S. F. Muni	$ 91	$300
AC Transit	74	209
BARTD	191	583
Golden Gate	34	99

	5-Year ($ Millions)	10-Year
Santa Clara	$ 1	$ 22
San Mateo	1	11
Total	$392	$1,224

To these shortfalls must be added $123 million not now covered by transit agency programs, representing Basic Level transit operations to implement certain Transportation System Management and Transportation Control Plan elements, minimum level transit services to unserved areas, and special needs such as to the disadvantaged.

To make estimates of shortfalls, the following allocations were made from existing revenue sources:

- Transit fares were continued at present levels. Collectively, fare revenues would provide about 30% of operating costs, although the percentage varies among individual operators.
- Operating subsidy from UMTA Section 5 and TDA funding was allocated within the region on a population basis, and allocated among transit operators according to laws, regulations, and MTC policies applying to these programs. Regionwide, about 80% of TDA funding available for public transit was allocated to operating needs.
- Local support for transit from property taxes and other sources was assumed to increase as indicated in the agencies' financial program.

The calculations did not assume emergency extension of the BARTD sales tax, and they assumed some portion of Santa Clara's sales tax funding is committed to transit development beyond the Basic Level.

Three alternatives might be used to provide additional funding: (1) raise fares, (2) increase subsidy programs enacted by the federal or state governments, or (3) increase funding from local general taxes or other local sources.

Of these, the MTC believes that a higher level of subsidy from federal or state sources should not be assumed for the Basic Level financial plan, except as a measure to release other funding for the support of transit development beyond the Basic Level. More funding for transit operations would, therefore, be a matter of policy on fare levels and/or sources of support from local sources within the area served by transit.

These alternatives for the fare level might be considered in each situation:

a) no-fare or low-fare levels;

b) present fare levels;

c) increased fares to maintain present proportion of operating costs covered by fare revenues;

d) increased fares to cover some fixed percentage of operating costs by fare revenues.

For purposes of the financial plan, any of these options might be appropriate for particular transit operations, depending upon local circumstances.

To keep fare revenues at the 1976-77 proportion of expenses, the following average fare increases would be needed over the 10-year period, according to estimates:

	Average Fare Increases
S. F. Muni	12¢
AC Transit	13¢
BARTD	28¢
Golden Gate	18¢
Santa Clara	20¢
San Mateo	5¢

Far larger increases would be required without substantial growth in local subsidies.

At this time, the MTC believes that the solution is best worked out within the territory served by each agency, but in general that there is a base of local funding that will supply whatever revenues are not provided by fares. Revenues from local property taxes or general sales taxes largely constitute the base of local support. The financial plan does not assume any allocation of bridge toll revenues to sustain Basic Level transit operations other than those from the Golden Gate Bridge.

Allocation of Transit Capital Funds. The financial plan considers that monies needed to match federal capital grants are available from current sources of funding and have highest claim upon those sources. In general, matching monies from current sources are sufficient to match federal grants at an 80-20 ratio for Basic Level capital requirements. No firm assumption, however, can be made about the adequacy of federal funding. If the capital grant program is continued as MTC has estimated, funds would be sufficient over a 10-year period, but there might well be a large shortfall of money in the initial 5 years. It is necessary that priorities be reviewed and determined annually in connection with adoption of the Annual Element of the Transportation Improvement Program.

If these sources are insufficient, more funding might be made available from discretionary revenues -- the Federal-Aid Urban program, and the State Article 26 fixed guideway funds. However, additions from these sources could not be made without diverting money from other Basic Level needs, unless the total amount of funding was simultaneously increased.

Financing the State Highway Program. If revenue forecasts are reasonably correct, administrative, operating, and maintenance costs will consume an increasing percentage of available revenues, leaving steadily less funds for capital outlay. The financial plan assumes continued support from the Interstate and other principal federal aid highway programs, all of which are capital outlay. There is in the first 5 years of the program a question whether

state money available for capital outlay is sufficient to match federal aids. It is quite clear than in the second five years, State funds would be insufficient if (a) Federal programs are continued, and (b) there is no State tax increase.

The Basic Level program gives first priority to adequate maintenance, rehabilitation, and the efficient operation of the highway system, including an increased TSM program. MTC policy also directs that maximum advantage be taken of discretionary provisions to fund public transit development from this revenue source, provided that doing so does not cause the region to lose federal funds. For the 10-year program, it is estimated that an increase of 3¢ per gallon in taxes upon motor fuel, or the equivalent, would be necessary to provide matching monies for the Basic Level system and finance a TSM program, even with no greater use made of discretionary funds for transit. In preference to the sacrifice of either the TSM program or federal capital funds for new highway facilities, this increase is included as an essential element of the Basic Level financial plan.

Toll Bridge Finance. It is considered that the bond obligations, operation and maintenance, and capital rehabilitation of existing bridges have prior claim upon toll revenues, and that all other funds at existing toll rates will at least be absorbed by the construction of the Antioch and Dumbarton Bridges.

Private Sector. The financial plan considers that an increasing part of the Transportation System Management program can be financed from other than public funds, through vanpools, etc. It also assumes, as a temporary measure only, that commuter rail service will be sustained by the Southern Pacific Railroad, pending completion of MTC studies on Peninsula transit service.

Airport Element.

(a) Airport Capital. It is expected that the airline airports will meet their capital requirements from revenue financing and to a lesser

extent (10-20%) from ADAP, without additional funding sources. Regionally significant general aviation airports will be able to meet their capital requirements using CAAP, ADAP, and local funding sources.

(b) Airport Operating. Both airline and general aviation airports will meet their operating expenses from derived revenues.

Local Roads and Streets. Funding for city and county roads and streets is assumed to be available from present state allocations, federal sources (including the FAU program), and local and private sources. No appraisal of current funding relative to needs has been made in the Financial Plan. But the needs of local roads are considered sufficiently critical that present funding should certainly not be diminished. Any employment of discretionary funding on behalf of public transit above current levels of state-aid and FAU programs should depend upon an increase in the total size of these programs.

Summary of Policy for Revenue Sources. Given the financial plan for meeting Basic Level needs, the MTC would observe the following funding priorities for existing and new revenue sources:

1) Transit fares would be held at current levels or raised relative to the level of local tax support in the areas served.

2) Federal and state-enacted transit operating subsidy programs, if increased, would be allocated to sustain new transit service the Basic Level or used to release equivalent funding for this purpose.

3) Federal and local capital funding for transit would be allocated between Basic and Beyond Basic program needs according to time priorities within the 10-year program period.

4) Transit capital funding from discretionary sources (FAU and Article 26) would be employed above current program levels only if total funding is increased to more than required by Basic Level needs.

5) Bridge tolls at current toll rates would be allocated entirely to the bridge program requirements, except for the Golden Gate Bridge District. Revenue from the toll increases would be reserved for 10-year program needs above the Basic Level.

6) Increases in motor vehicle and fuel taxes would be enacted as required by federal aid matching and the highway maintenance, rehabilitation, and TSM programs.

Financing Transportation System Development and Operation Beyond the Basic Level

The plan for financing the 10-year Program beyond the Basic Level must provide for $1,771 million in additional expenditures for transit and $809 million in additional expenditures for state highways. It is anticipated that at least $640 million in additional revenue would be needed to fund the entire amount for transit and that none of the additional highway construction could be built without additional revenues of $900 million. Use of additional funds for Beyond Basic transportation programs has not been programmed until the end of the first three years of the 10-year Transportation Development Program, and the bulk of the funds programmed for Beyond Basic uses would not be needed until the last five years.

The Revenue Situation in General. With the exception of the sales tax in Santa Clara County, and the reserve of some TDA funds in other places, all funding for Beyond Basic must be in terms of increased program levels for federal-state assistance, higher tax rates, higher tolls, higher fares, or new revenue sources for transportation. The following is a brief summary of the overall situation:

. To finance the highway needs of the full Transportation Development Program, and at the same time allocate 25% of revenues to fixed guideway transit development, would require by 1986 a State motor fuel

tax of 22¢ per gallon, or its equivalent, compared with 7¢ today. This is assuming the current distribution of federal and state expenditures to the Region, which now--apart from the allocation to city-county roads--restores only $1 for every $2 generated.

- Given liberal assumptions about continued federal aid for public transit, there is still estimated a revenue shortfall of near $250 million, if it is projected that federal funding will supply 60% of Beyond Basic capital investment funds. An expanded FAU program could make up the difference.

- Local matching monies for federal transit capital funds might be produced from Art. 26 fixed guideway monies, bonds supported by increased bridge tolls whose revenue was allocated for the purpose by MTC, or special charges for airport access. Matching money in Santa Clara and San Mateo Counties is available under present arrangements for transit system expansion from the sales tax.

- The largest restraint upon transit system development in accord with the 10-year Program is the financing of the costs of operation, once capital development projects have been completed. MTC supports the principle that no transit agency should be required to support operations from fare revenues alone. It seems unlikely at present that as much as 50% of costs for new transit systems can be covered with fare revenues.

A complete package of proposed new and expanded revenue sources must be considered by MTC in order to finance the Development Program. Studies performed by MTC have investigated the alternatives, and all involve difficult choices.

Financial Plan. Tables 9 and 10 summarize the proposed new sources of revenues and their allocation to the Basic and Beyond Basic Levels. The proposals

TABLE 9

TRANSIT 10-YEAR FINANCIAL PLAN - TOTAL MTC REGION

	PROGRAM CATEGORY	PROGRAM COSTS ($M)	EXISTING SOURCES ($M)	REVENUE SHORTFALL ($M)	POTENTIAL NEW REVENUE SOURCES ($M)												
					BASIC					BEYOND BASIC							
					G.G.Br. Tolls	1/2% BARTD	SF/AC Property	S.Q. Fares	1% in lieu	1/2%SM Mrn, Son	Bonds SM SCC	SCA 15	BTC Tolls	Airport Surcn'g	Total	Contin-gency
BASIC	Administration & Support: Maintenance & Operations	4586	3239	1347	80	589	170	338	170							
	Debt Service	554	554	0	--	--	--	--	--							
	Rehabilitation & Replacement	395	326	69	5	35	22	7	--							
	TSM/TCP	56	44	12	2	1	5	4	--							
	Other Capital Outlay	15	13	2	--	--	1	1	--							
	System Development Capital Outlay	352	352	0	--	--	--	--	--							
	"BASIC" TOTALS	5958	4528	1430	87	625	198	350	170							
BEYOND BASIC	Administration & Support: Maintenance & Operations	373	203	170				15	206	118	--	--	--			
	Debt Service	48	11	37				--	--	37	--	--	--			
	Rehabilitation & Replacement	0	0	0				--	--	--	--	--	--			
	TSM/TCP	0	0	0				--	--	--	--	--	--			
	Other Capital Outlay	98	79	19				--	--	--	--	--	19			
	System Development Capital Outlay	1252	838	414				--	--	110	190	61	68	44		
	INCREMENTAL "BEYOND BASIC" TOTALS	1771	1131	640				15	206	265	190	61	87	44		
	PROGRAM TOTALS	7729	5659	2070	87	625	198	365	376	265	190	61	87	44	2298	228

TABLE 10

10-YEAR FINANCIAL PLAN, STATE HIGHWAY SYSTEM - TOTAL MTC REGION

	PROGRAM CATEGORY	PROGRAM COSTS ($M)	EXISTING SOURCES ($M)	REVENUE SHORTFALL ($M)	POTENTIAL NEW REVENUE SOURCES ($M)											
					BASIC					BEYOND BASIC						
									3.0¢/gal fuel tax	11.6¢/gal.					Total	Contingency
BASIC	Administration & Support: Maintenance & Operations	1181	1181	0					--							
	Debt Service	87	87	0					--							
	Rehabilitation & Replacement	179	141	38					38							
	TSM/TCP	132	42	90					90							
	Other Capital Outlay	113	55	58					58							
	System Development Capital Outlay	437	256	181					181							
	"BASIC" TOTALS	2129	1762	367					367							
BEYOND BASIC	Administration & Support: Maintenance & Operations	73	0	73						73						
	Debt Service	0	0	0						--						
	Rehabilitation & Replacement	12	0	12						12						
	TSM/TCP	22	0	22						22						
	Other Capital Outlay	8	0	8						8						
	System Development Capital Outlay	784	0	784						784						
	INCREMENTAL "BEYOND BASIC" TOTALS	899	0	899						899						
	PROGRAM TOTALS	3028	1762	1266					367	899					1266	0

include sales taxes, a motor vehicle "in lieu" tax, and bridge toll and airport surcharges, as well as increases in present sources now providing funds. The adequacy of the funding depends, as previously noted, upon the federal-aid program for transit being at a higher level than can be forecast today.

The financial plan does not contemplate an extensive bond issue for public transportation development, such as financed the BART system. Rather, the main reliance is on "pay-as-you-go" financing of "incremental" additions to the system. Regional-local revenue sources first used to match federal aids are then allocated to sustain transit operations. Only a limited degree of transit system development is possible with this approach, but it conforms to present funding realities and national policy on federal aid.

This, however, is a limited financial plan, relative to the full needs of the public transportation system included in MTC's Plan. Transit system development has been restrained--even at the Beyond Basic Level--to those areas where minimum demands would be made for new financing to sustain new transit operations. The largest increases are required for systems that exist today. On the other hand, the continuing upgrade and further development of public transit will require far higher fares to be paid by the riding public, or large new public subsidies.

Financing Alternatives. In order to illustrate, in dollars and cents, some of of the choices that the Region might make, three potential revenue packages are presented below. In each case, a set of possible taxes is shown with an estimate of potential yield. The total yield of all sources would in each case exceed the indicated amount required for the full 10-year program. The packages are shown in Table 11.

The first package is based on the expansion of existing revenue sources for transportation and includes the following taxes:

1. Property Tax (10¢, 25¢, 50¢)
2. Sales Tax ($\frac{1}{4}$%, $\frac{1}{2}$%)

3. Additional Transit Development Act (TDA) Tax (¼%)

4. Fuel Tax (1¢, 2¢, 3¢)

5. Vehicle Registration Fee ($10)

6. Vehicle "In-Lieu" Tax (1%)

7. Transit Fare Increases (minor, major)

These taxes are "regressive" in that the burden of the taxes falls disproportionately on low-income people.

The second package is composed of taxes not traditionally used to fund transportation, although some, such as the income tax, are existing sources, while others are variations on existing sources. They are generally representative of a "progressive" tax policy. This package includes the following:

1. Income Tax Surcharge (5%, 10%)

2. Property Tax with substantial rebate to all households (10¢, 25¢, 50¢)

3. Vehicle "In-Lieu" Tax, with substantial deduction (1%, 2%)

4. Sales Tax with large rebate to households (½%)

5. Employer-Provided Fast-Pass for all employees ($10/mo.)

6. Property Transfer Tax with large deduction (?)

7. Benefit Assessment District Tax on commercial and industrial property in vicinity of BART stations and freeway interchanges (?)

The third tax package is designed to encourage the diversion of travel from automobiles to transit. This package taxes auto ownership and use heavily and implies the selection of highway projects which provide preferential treatment for transit and the probability of the need for less money for highways emerging from thorough analysis of project alternatives. This package includes the following taxes:

1. Fuel Tax made available for transit (10¢)

2. Varying Vehicle Registration (1%)

3. Parking Charges (10¢, 20¢)

4. Toll Surcharges (?)

5. Employer-Paid Fast-Pass ($10/mo.)

TABLE 11. THREE ALTERNATIVE REVENUE PACKAGES FOR FINANCING ADDITIONS TO THE TRANSPORTATION DEVELOPMENT PROGRAM

A. Expansion of Existing Revenue Base

	Source (rate)[a]	Yield ($M)
1.	Property Tax (10-50¢)	210-1060
2.	Sales Tax (¼-½%)	650-1290
3.	Transit Development Act (TDA) expansion (¼%)	650
4.	Fuel Tax (1-3¢)	250-750
5.	Vehicle Registration Fee ($10)	360
6.	Vehicle "In-Lieu" Tax (1%)	490
7.	Transit Fare Increases	140-420

B. Revenues Based on Equity

	Source (rate)[a]	Yield ($M)
1.	Income Tax Surcharge (5-10%)	460-920
2.	Property Tax with substantial rebate to all households (10-50¢)	105-530 [b]
3.	Vehicle "In-Lieu" Tax with substantial deduction (1%)	245 [b]
4.	Sales Tax with large rebates to households	325-645 [b]
5.	Employer-Provided Fast-Pass for all employees ($10/mo.)	2400 [c,d]
6.	Property Transfer Tax with large deduction	?
7.	Benefit Assessment District Tax on commercial and industrial property in vicinity of transit stations and freeway interchanges	?

C. Taxes Providing Incentive to Transit Use

	Source (rate)[a]	Yield ($M)
1.	Fuel Tax made available for Transit (3¢)	250
2.	Vehicle Registration (1%)	490
3.	Parking Charges (10-25¢)	380-950
4.	Toll Surcharge	110
5.	Employer-Paid Fast Pass ($10/mo)	2400 [c,d]

NOTES:
(a) Tax information and yield derived from TFTF Report (Revenue Sources for Transit Support, Transit Finance Task Force, MTC, Berkeley, 1976) unless noted otherwise.
(b) It is assumed that rebates or exemptions would reduce tax yield by 50% from estimates in TFTF Report.
(c) Assumes employment of approximately 2M and payment of $120/year/employee.
(d) Note that this source would substitute for substantial portion of transit fares collected.

REVISION TO APPENDIX, pp. 130-131

TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

MTC will annually adopt a five-year Transportation Improvement Program (TIP) as mandated in federal regulations. The TIP is an element of the ten-year Capital Improvement Program of the Regional Transportation Plan and is constrained by reasonable, predictable sources and levels of funding.

The Annual Element of the TIP is for the next ensuing fiscal year commencing in July following the annual adoption of the TIP and revision of the Regional Transportation Plan. Any project or expenditure in the Annual Element may represent an initial commitment of funds that will include additional commitments extending over a period of several years.

The Annual Element represents relatively firm funding commitments to ongoing or new programs of projects. However, changes may be required on occasion. In such instances staff will present the proposed changes and its recommendations to the Grant Review and Allocations Committee. The Committee may approve individual Annual Element changes involving up to $5 million, within and between programs or projects of the same transportation mode where all project documentation requirements have been met. Where a budget change will exceed $5 million, or on other occasions if the Commission desires, the Committee will submit its comments and recommendations to the full Commission.

A TIP change involving the reprogramming of a project from the second or third year into the Annual Element of the TIP, may be approved by the Commission providing all project document requirements have been met; it will not impact unfavorably on other programs or projects in the Annual Element; or it is desirable to make maximum use of available resources.

The TIP programming process requires that implementing agencies are the initiators of the program of projects for which they are responsible. MTC, as

the responsible Metropolitan Planning Organization for the region, participates in the cooperative process through which projects are proposed, in order to ensure that TIP projects are compatible with the Regional Transportation Plan. Changes to the TIP generally do not require revision of the Plan, other than at the time of the annual revision and update of the Plan's Transportation Development Program (Section IV).

The inclusion of a project in the TIP, or the reprogramming of a project within the five-year period of the TIP, does not constitute MTC approval for the purpose of obligating transportation assistance funds. Annual approval of the TIP is intended to satisfy the requirements of the federal A-95 review process for those projects identified in the TIP's Annual Element. But each project must be submitted individually to the Commission (together with appropriate environmental documents) for review of its consistency with the Regional Transportation Plan, as required by MTC statutes.